



United States Department of the Interior

NATIONAL PARK SERVICE
Fire Management Program Center
3833 South Development Avenue
Boise, Idaho 83705-5354

IN REPLY REFER TO:

P86(NIFC)

January 8, 2004

Memorandum

To: Fire Management Officers

From: National Fire Management Officer /s/ Sue Vap

Subject: Career Training Opportunity - Technical Fire Management 2004-2006

The National Park Service Fire Management Program Center is offering a training opportunity for three fire management candidates to attend Technical Fire Management (TFM) sponsored by Washington Institute and Colorado State University. This educational opportunity is designed to improve the technical proficiency of fire specialists beyond the level that may be attained through on-the-job training. The subject matter includes fire ecology, fire behavior, fuels management, data analysis, economics and finance.

TARGET AUDIENCE - This training is for current career and career-conditional employees that are fire management officers, fuels/prescribed fire specialists, and suppression specialists at the GS 5-11 levels and who intend to pursue a career in fire management. The full benefit of the program can only be realized by those who have experience in fire and fuels management. It is not intended for people with four-year resource, biological science or fire degrees or a significant number of credits in these fields.

COMMITMENTS - This program is demanding. It is approximately 18 months long, divided into five two-week modules and a final project report. Prior to the program starting, an optional unit is available for students to brush up on math and statistics skills, which we strongly recommend. In order to satisfactorily complete the course, students can expect to devote extra time to the course work, outside normal working hours. The focus of the final project is agreed upon by the home unit manager, the student and the responsible fire management officer.

The final project is a written report culminating the learning process and is often the most challenging part of the program. This project is accomplished by systematically describing, analyzing and solving the problems/subject selected. The student is required to make an oral presentation before a panel of interagency representatives to defend the decision criteria used in the analysis and solving the problem. This project must be completed within the established time frames.

FUNDING - All tuition for the Technical Fire Management program will be funded by the NPS National Fire Management Program Center. Tuition for this program is approximately \$8,500 per student. Cancellation fee without replacement by July 29, 2004, is \$2,500. If the student fails to show for Module 1, full tuition will be billed. Travel funding will be provided by the student's regional office from funds designated by the FMPC.

PRE-REQUISITES - Candidates **MUST** have completed S-390. In addition, the following skills are required: technical writing course or the equivalent, basic algebraic manipulation and a working knowledge of BEHAVE Plus, FIREFAMILY+, Windows (98, 2000 or XP), Internet Explorer, Microsoft Office Word, Excel (with data analysis tool pack) and Powerpoint.

Candidates may also want to acquire the following skills prior to beginning the program: knowledge of National Environmental Protection Act (NEPA), field sampling and measurement, use of CONSUME, agency fire management budgeting process, KCFAST, WIMS, and knowledge of NFDRS processes. Staff at the FMPC will assist students in acquiring necessary skills and knowledge as needed.

PROGRAM INFORMATION - Tentative dates for each of the modules are shown below; locations and confirmed dates will be determined and announced at a later date.

Module IA, Math Review	October 4-8, 2004
Module I, Statistics	November 1-12, 2004
Module II, Economics	January 3-14, 2005
Module III, Fuels Management	March 1-11, 2005
Module IV, Fire Ecology and Fire Effects	May 2-13, 2005
Module V, Fire and Land Management	September 19-30, 2005
Module VI, Final Presentation and Review	April 10-14, 2006

SERVICE AGREEMENT - Selected candidates will sign an agreement to complete this training. Failure to complete all six training modules, including the final project, may require repayment by the employee of the training costs. Both students and supervisors are reminded that this training requires a total commitment and dedicated time to satisfactorily complete the 18-month long program.

PROGRAM CREDITS - It has been determined that successful completion of this program will qualify the candidate for 18 of the 24 academic hours required to qualify for the Fire Management Specialist series (GS-401). The GS-401 series is a key component of the new Interagency Fire Program Management Qualifications, Standards and Guide which is scheduled to be implemented starting October 1, 2004. NPS personnel offices require students to present a certificate from Washington Institute in order to obtain this credit. The certificate will only be issued after completion and presentation of the final project. The student must complete all modules and earn a passing score of 70 percent on the mid-term and final examination.

The participant additionally has the option of buying credits (three per module) through Colorado State University. The rate is approximately \$180.00 per module or \$1080.00 for the full program. This cost is borne by the trainee; NPS will not pay for these credits. Colorado State University credits do not need to be purchased in order for TFM credits to be applied toward qualification in the GS-401 series.

NUMBER OF POSITIONS - Three positions are available to the NPS for this next session. Employees with a professional interest in Fire Management, but lacking a degree are urged to apply.

SELECTION PROCESS – The applications will be rated, ranked and prioritized by the Program Manager at the Fire Management Program Center. Recommendations for selection will be made to Regional FMOs for final selection.

HOW TO APPLY - Applicants must submit the following documents:

SF-171, OF-612 or resume including training records and/or college transcripts.

Application Statement, Recommendation and Approval form (attachment 1) through your appropriate Fire Management Officer.

Response to the Evaluation Criteria (attachment 2), not to exceed three pages for all criteria.

Staple documents in the upper left corner; and please, no covers or fancy presentation packages.

WHERE TO SEND APPLICATION PACKAGES - all materials must be received by February 20, 2004. Send to:

National Interagency Fire Center
National Park Service
Fire Management Program Center
Attention: Mark Koontz
3833 S. Development Ave.
Boise, ID 83705

If you have questions about the program or would like to be put in contact with a current or past student please contact Mark Koontz at (208) 387-5090 or through email via mark_koontz@nps.gov.

Attachments:

- 1 - Applicant Statement, Recommendation and Approval
- 2 - Evaluation Criteria
- 3 - TFM Brochure

**TECHNICAL FIRE MANAGEMENT
APPLICATION STATEMENT, RECOMMENDATIONS AND APPROVAL**

STUDENT: Discuss why you wish to attend Technical Fire Management (TFM), include how this program will help you achieve your short and long-term career goals.

IMMEDIATE SUPERVISOR RECOMMENDATIONS: I approve the candidate's attendance at TFM and I will ensure necessary dedicated time and support is available to the student to successfully complete this program.

Comments:

Signature - Immediate Supervisor

Date

FIRE MANAGEMENT OFFICER RECOMMENDATION: I approve the candidate's attendance at TFM and will ensure necessary support is available to the student to successfully complete this program. Coordination has occurred between the park and regional fire management staff regarding the appropriateness of this candidate and time availability.

Comments:

Signature - Park Fire Management Officer or Chief Ranger

Date

TECHNICAL FIRE MANAGEMENT EVALUATION CRITERIA

Please submit a narrative statement addressing your knowledge, skills, and abilities related to the following criteria when applying to attend the Technical Fire Management (TFM) program. Be sure to address all listed items specifically; limit your total response to these questions to no more than a total of three pages, single-spaced.

1. How have you been able to demonstrate, during your career to date, your ability to communicate both orally and in writing?
2. Describe your knowledge of fire management program planning, including the following specific items:
 - Budgeting
 - Preparedness
 - Prevention
 - Fire Management Activity Planning
3. Describe your knowledge of fire-related effects and how that knowledge was gained, including the following specific subject areas:
 - Fire ecology
 - Fuels management
 - Prescribed fire management
 - Smoke management
4. What is your level of ability with regard to the use of computer hardware and software? Describe your experience and skill level using the following programs or other applications related to fire management and hazardous fuels reduction programs:
 - BEHAVE Plus, CONSUME
 - NFDRS, KCFAST, WIMS
 - Word Processing (e.g., Microsoft Word, WordPerfect)
 - Database/Spreadsheet (e.g., Quattro Pro, Lotus, Excel, dBase, Access)
 - Operating Systems (e.g., Unix, Windows 3.1, 95, 98, 2000, XP)
5. What is your assessment of your math skills? Have you received instruction in advanced algebra or statistics since graduating from high school?
6. Briefly describe your knowledge and experience in fire operations, including fireline experience, Incident Command System qualifications and hands-on experience in fire program management on a daily basis.

TECHNICAL FIRE MANAGEMENT

A PROFESSIONAL MID-CAREER PROGRAM FOR FIRE, FUELS AND FOREST RESOURCE MANAGERS

Presented by Washington Institute in cooperation with Colorado State
University

Technical Fire Management (TFM) is designed for individuals in public agencies who have experience in wildland fire suppression, fire prevention, fire management, and the use of fire in attaining resource management goals. This course is not intended for recent college graduates who have attended similar courses. An objective of TFM is to improve the technical proficiency of fire and resource managers beyond the level that may be obtained through on-the-job training. The subject matter emphasizes fire ecology, fire behavior, fuels management, data analysis, economics and finance- prepares the specialist to perform fire management tasks at the GS 7-11 level.

TFM involves intensive education comparable to silviculture and engineering mid-career programs. The course consists of ten days of instruction in each of the five course modules. Homework and some fieldwork outside regular duty hours may be assigned. The sixth module requires each participant to defend a professional paper before a review panel of TFM instructors and agency representatives. The paper is evaluated on the basis of the student's ability to apply the knowledge and skills acquired in TFM to a problem on the home unit.

TFM IS DESIGNED FOR MANAGERS AND TECHNICIANS

- with resource planning responsibilities
- who need to know about fuels, fire behavior and fire ecology

TFM EMPHASIZES

- quantitative analysis of resource management problems
 - the rational planning process
 - statistics
 - economics and finance
 - ecology
- and how the concepts presented can be applied to identifying and analyzing fire and fuels problems.

TFM TOOLS INCLUDE EXTENSIVE USE OF COMPUTERS

- spreadsheet, data base and word processing software
- fire behavior models such as BEHAVE Plus, FARSITE, and RERAP
- GIS-ARCVIEW 3.0

The TFM program has been designed for managers and technicians for natural resource planning requiring fuels, fire behavior, and fire ecology input. Since the inception of TFM in 1981, participation has grown to a national level and includes people from the USDA Forest Service (Regions 1, 2, 3, 4, 5, 6, 8), the Bureau of Land Management, the Bureau of Indian Affairs and the National Park Service. *TFM* is administered by the Washington Institute, Inc., whose mission is to provide mid-career training and education to people involved in natural resource management. A *Steering Committee* composed of agency representatives provides guidance in curriculum content and candidate selection. *Colorado State University* also provides curriculum oversight and the opportunity for participants to acquire 18 upper division semester credits for the successful completion of *TFM*. These credits may be applied to either an undergraduate or graduate degree in fire science at Colorado State University.

REQUIREMENTS

Applicants must have:

- a working knowledge of BEHAVE Plus
- completed S-390
- familiarity with use of computers, including spreadsheet and word processing programs
- technical writing courses or equivalent
- knowledge of mathematics through algebraic exponential and logarithmic functions

MODULE IA

math refresher

technical report writing

MODULE I, STATISTICS

scientific method, frequency distribution, measures of variation, probabilities and their distributions, sampling, analysis of variance, regression and correlation.

MODULE II, ECONOMICS

microeconomics, demand and supply, timber economy, valuing forest benefits, benefit cost analysis, economics of wildfire management, financial analysis, decision tree analysis with finance.

MODULE III, FUEL MANAGEMENT

fire behavior, fuels measurements, fire behavior models, risk assessment, rational planning process applied to fuels and fire analysis.

MODULE IV, FIRE ECOLOGY

effects of fire on natural resources, fire history, landscape ecology and the role of disturbance, landscape analysis methods and models, integrating fire ecology principles in planning.

MODULE V, FIRE AND LAND MANAGEMENT

policy directions, risk assessment in fire management, planning and execution of fire management budgets, planning with GIS.

MODULE VI, FINAL PROJECTS, is the culmination of the *TFM* experience. Each participant will be expected to demonstrate his or her ability to apply the knowledge and skill obtained in the program by writing and defending a paper on a topic related to fire or fuels management. The expectation is that these papers are of professional quality and that they quantitatively

demonstrate the effectiveness or value of management alternatives. Topics recently chosen include assessments of risk associated with prescribed natural fire/wildland fire use, evaluation of fuel treatment alternatives and landscape level fuels analysis. When completed, the participant is issued a ***TFM CERTIFICATE OF COMPLETION*** jointly awarded by Washington Institute and Colorado State University.

In the event that the requirements for TFM have not been completed, participants will be notified by letter that incomplete grades will be changed to failure one year after grade issue.

The ***location*** for ***TFM*** modules has included training facilities such as the National Park Service Albright Center at Grand Canyon National Park, the USDA-FS training center in Redmond, Oregon, and the Marriott Residence Inn in Bothell, Washington.

COST

The fee for Modules I-VI of the 2004-2006 program is \$8,500. The fee for Module IA is \$500.00. Full tuition is due at the time of registration (July 29, 2004). Cancellations after July 29, with no replacement identified by a steering committee representative, are required to pay a \$2,500.00 cancellation fee. No tuition refunds will be granted after the first class day. Tuition at Colorado State University is \$180.00 per module(s) (II-VII) for those who wish to take the program for college credit.